A.3.5 SWMU 14

Description

SWMU 14 consists of two suspected 20-foot by 20-foot TEL sludge burials located in the eastern portion of Tank Basin 23. The Investigation Area was identified based on the indicated presence of the burial on the Refinery Leaded Burial Map.

During the 1st-Phase RFI Soils Investigation (1995) TEL was detected at a concentration of 0.706 mg/kg in one soil sample (SB0214); however, lead was detected at a concentration of only 21.4 mg/kg from this same sample interval. Therefore, confirmatory samples were collected from (S0736) during the full RFI.

As shown on Figure A.3.5 and summarized on Table A.3.5, 29 soil borings, 17 soil samples, and groundwater samples collected from one hydropunch and one monitoring well have been used to characterize this SWMU. During the 1st-Phase RFI, nine soil samples were analyzed for Skinner's List VOCs and SVOCs, and TEL, and ten soil samples were analyzed for lead. Six soil samples were analyzed for lead and TOL, and the two surficial samples were also analyzed for TCL VOCs and SVOCs during the full RFI. In addition, one soil sample (S0737) was analyzed for SPLP lead and physical characteristics[1].

Soils

The following table summarizes the number of samples where the delineation criteria were exceeded:

Constituents of Concern	Surface Soils (0 to 2 ft)	Fill Material (>2 ft)	Native Soils	Total
Benzene	0/2	0/9	0/0	0/11
Other VOCs	0/2	0/9	0/0	0/11
Benzo(a)pyrene	0/2	0/9	0/0	0/11
Other PAHs	0/2	0/9	0/0	0/11
Lead	0/2	0/12	0/2	0/16
TEL/TOL	0/2	0/11	0/2	0/15

Although odors and elevated PID readings were noted in several of the borings in the vicinity of SWMU 13, no COCs were detected above the applicable soil delineation criteria in any of the 17 soil samples collected from SWMU 14.

Groundwater

Monitoring well MW-103 was installed at the approximate location of HP0101, where elevated concentrations of lead (706 µg/L), benzene (7 µg/L), naphthalene (350 µg/L), 1-

[1]Physical characteristics include saturated and unsaturated permeability tests, moisture content, relative permeability, bulk density, porosity, soil sorptive capacity, CEC, TOC, pH, Eh and grain size distribution.

methylnaphthalene (670 µg/L), and 2-methylnaphthalene (670 µg/L) had been detected in 1997. Only arsenic (detected at 9J µg/L) was detected above the groundwater criterion in the November 2002 sample collected from this well. Based on a comparison of hydropunch samples (collected via traditional methods as well as with porous media) to samples from nearby monitoring wells, SVOC and metals data collected from temporary well points are not considered to be representative of ambient groundwater conditions.

Summary

No COCs were detected above the applicable soil delineation criteria at this SWMU. Although arsenic (9J µg/L) was detected at a concentration slightly in excess of the applicable groundwater delineation criterion (8 µg/L), it is probable that this slight exceedance is more representative of naturally-occurring arsenic that is ubiquitous in both soils and groundwater at the Refinery. Furthermore, it is improbable that SWMU 14 would be a source of arsenic, because arsenic has not been detected above the applicable soil delineation criterion in any of the soil samples from SWMU 14. In conclusion, no further action is recommended for soils at SWMU 14. The exceedance of arsenic in groundwater will be included in the site-wide groundwater evaluation in the CMS.